Lockheed Martin Conducts Flight Tests Of Aircraft Laser Turret For Defense Advanced Research Projects Agency

Innovative Design Promises to Expand Laser Weapon Effectiveness on Fighter Aircraft



The Aero-adaptive Aero-optic Beam Control turret that Lockheed Martin is developing for the Defense Advanced Research Projects Agency and the Air Force Research Laboratory has completed initial flight testing. (Photo: Air Force Research Laboratory.)

SUNNYVALE, Calif., Sept. 15, 2014 /PRNewswire/ -- Lockheed Martin [NYSE: LMT], in partnership with the Air Force Research Laboratory (AFRL) and the University of Notre Dame, has demonstrated the airworthiness of a new beam control turret being developed for the Defense Advanced Research Projects Agency (DARPA) and AFRL to give 360-degree coverage for high-energy laser weapons operating on military aircraft. A research aircraft equipped with the Aero-adaptive Aero-optic Beam Control (ABC) turret conducted eight flights in Michigan.

"These initial flight tests validate the performance of our ABC turret design, which is an enabler for integrating high energy lasers on military aircraft," said Doug Graham, vice president of advanced programs, Strategic and Missile Defense Systems, Lockheed Martin Space Systems.

The ABC turret system is designed to allow high-energy lasers to engage enemy aircraft and missiles above, below and behind the aircraft. Lockheed Martin's flow control and optical compensation technologies counteract the effects of turbulence caused by the protrusion of a turret from an aircraft's fuselage.

All turret components met U.S. Air Force and Federal Aviation Administration airworthiness requirements.

Subsequent flight tests over the next year will demonstrate the turret in increasingly complex operations.

Lockheed Martin has pioneered the development and demonstration of high-energy laser capabilities for more than 30 years and has made advances in areas such as precision pointing and control, line-of-sight stabilization and adaptive optics and high-power fiber lasers.

Headquartered in Bethesda, Maryland, Lockheed Martin is a global security and aerospace company that employs approximately 113,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. The Corporation's net sales for 2013 were $45.4 billion.

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